

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-26. (Canceled)

27. (Currently Amended) An implant comprising:

a port structure comprising an outer wall having a substantially uniform outer circumference interrupted by a plurality of regions having areas of a smaller outer circumference, wherein a first region of the plurality of regions comprises one or more discrete tactile surface structures, and a second region of the plurality of regions comprises a plurality of discrete tactile surface structures, wherein each of said discrete tactile surface structures encircles the port structure and are arranged along a length of the port body that comprises at least a portion of an implant area such that each of said discrete tactile surface structures is subcutaneous when the implant is inserted into a body, the plurality of discrete tactile surface structures improving ingrowth characteristics associated with the implant by promoting growth of cellular tissue in at least one direction relative to the surface of the implant;

a holding structure coupled to a first end of the port structure, the holding structure comprising an encircling ring protruding from the first end of the port structure, the encircling ring comprising a plurality of openings spaced around said encircling ring; and

a connecting structure coupled to a second end of the port structure, the connecting structure protruding out of tissue when the implant is inserted into a body and capable of conditionally attaching to a connecting element.

28. (Previously Presented) The implant as set forth in claim 27, wherein the implant comprises a non-biosorbable material.

29. (Previously Presented) The implant as set forth in claim 28, wherein one of the plurality of regions of tactile surface structure is provided in a region of the implant, wherein, after the implant has been implanted in a body, the surface structure is generally adjacent to the skin.

30. (Previously Presented) The implant as set forth in claim 27, wherein the each of the tactile surface structures exhibits a width of approximately 1 to 10 mm.
31. (Previously Presented) The implant as set forth in claim 27, wherein each of the tactile surface structures exhibits a width of approximately 4 to 5 mm.
32. (Previously Presented) The implant as set forth in claim 27, wherein one or more of the tactile surface structures comprises a groove.
33. (Previously Presented) The implant as set forth in claim 32, wherein the depth of said at least one or more grooves is approximately 0.1 to 10 times the average width of a type of cell adjacent to the groove after the implant is implanted.
34. (Previously Presented) The implant as set forth in claim 32, wherein the depth of said at least one or more grooves is approximately 0.3 to 5 times the average width of a type of cell adjacent to the groove after the implant is implanted.
35. (Previously Presented) The implant as set forth in claim 32, wherein the depth of the at least one groove is approximately 1 to 10 μm .
36. (Previously Presented) The implant as set forth in claim 32, wherein the depth of the at least one groove is approximately 3 to 4 μm .
37. (Previously Presented) The implant as set forth in claim 32, wherein the width of the at least one groove is in the range of approximately 1 to 10 μm .
38. (Previously Presented) The implant as set forth in claim 32, wherein the width of the at least one groove is in the range of approximately 4 to 5 μm .
39. (Previously Presented) The implant as set forth claim 32, wherein, if more than one groove is provided, the distance of the grooves from each other is approximately 2 to 20 μm .

40. (Previously Presented) The implant as set forth claim 32, wherein, if more than one groove is provided, the distance of the grooves from each other is approximately 10 μm .

41. (Previously Presented) The implant as set forth in 32, wherein the ratio of the width of the groove to the depth of the groove is approximately 0.5 to 2.

42. (Canceled)

43. (Previously Presented) The implant as set forth in claim 27, wherein the plurality of tactile surface structures promote growth of cellular tissue in a direction parallel to a skin surface into which the implant is inserted.

44. (Previously Presented) The implant as set forth in claim 27, wherein the plurality of tactile surface structures promote growth of cellular tissue by orienting cell growth in a uniform direction relative to the surface structure of the implant.

45. (Currently Amended) A method for producing an implant for implanting in a living body, comprising the step of:

providing a port structure comprising an outer wall having a substantially uniform outer circumference interrupted by a plurality of regions having areas of a smaller outer circumference, wherein a first region of the plurality of regions comprises one or more discrete tactile surface structures, and a second region of the plurality of regions comprises a plurality of discrete tactile surface structures, wherein each of said discrete tactile surface structures encircles the port structure and are arranged along a length of the port body that comprises at least a portion of an implant area such that each of said discrete tactile surface structures is subcutaneous when the implant is inserted into a body, the plurality of discrete tactile surface structures improving ingrowth characteristics associated with the implant by promoting growth of cellular tissue in at least one direction relative to the surface of the implant;

coupling a holding structure to a first end of the port structure, the holding structure comprising an encircling ring protruding from the first end of the port structure, the encircling ring comprising a plurality of openings spaced around said encircling ring; and

coupling a connecting structure to a second end of the port structure, the connecting structure protruding out of tissue when the implant is inserted into a body and capable of conditionally attaching to a connecting element

46. (Previously Presented) The method as set forth in claim 45, wherein the plurality of tactile surface structures are provided by turning a groove.

47. (Previously Presented) The method as set forth in claim 45, wherein the plurality of tactile surface structures are provided by etching.

48. (Previously Presented) The method set forth in claim 45, wherein the plurality of tactile surface structures promote growth of cellular tissue in a direction parallel to a skin surface into which the implant is inserted.

49. (Previously Presented) The method set forth in claim 45, wherein the plurality of tactile surface structures promote growth of cellular tissue by orienting cell growth in a uniform direction relative to the surface structure of the implant.

50. (Currently Amended) An implant comprising:

a port structure comprising an outer wall having a substantially uniform outer circumference having regions of interruptions, the regions comprising areas of a smaller outer circumference, wherein a first region interrupting the substantially uniform outer circumference comprises one or more discrete tactile surface structures, and wherein a second region interrupting the substantially uniform outer circumference comprises a plurality of discrete tactile surface structures, wherein the first and second region are separated by a portion of the outer wall having the substantially uniform outer circumference, and wherein each of said discrete tactile surface structures encircles the port structure and are arranged along a length of the port body that comprises at least a portion of the implant area such that each of said discrete tactile surface structures is subcutaneous when the implant is inserted into a body, ~~the one or~~

~~more grooves and~~ the plurality of discrete tactile surface structures improving ingrowth characteristics associated with the implant by promoting growth of cellular tissue in at least one direction relative to the surface of the implant;

a holding structure coupled to a first end of the port structure, the holding structure comprising an encircling ring protruding from the first end of the port structure, the encircling ring comprising a plurality of openings spaced around said encircling ring; and

a connecting structure coupled to a second end of the port structure, the connecting structure protruding out of tissue when the implant is inserted into a body and capable of conditionally attaching to a connecting element.

51. (New) A transcutaneous implant comprising:

a port structure comprising an outer wall having a first region and a second region, each of the first and second regions having a substantially smooth surface, and a surface structure region disposed between the first and second regions, wherein the surface structure region comprises a plurality of discrete surface structures encircling the port structure and is arranged along a length of the port body that comprises at least a portion of an implant area, the plurality of discrete surface structures improving ingrowth characteristics associated with the implant by promoting growth of cellular tissue in at least one direction relative to the surface of the implant;

a holding structure coupled to a first end of the port structure, the holding structure comprising an encircling ring protruding from the first end of the port structure, the encircling ring comprising a plurality of openings spaced around said encircling ring; and

a connecting structure coupled to a second end of the port structure, the connecting structure protruding out of tissue when the implant is inserted into a body and capable of conditionally attaching to a connecting element.

52. (New) The implant as set forth in claim 51, wherein the holding structure further comprises an attachment region configured for coupling the holding structure to the first end of the port structure, and wherein the attachment region includes a circumferential recess in an outer surface thereof.